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## Original Communications.

### NOTES ON CHLORAL.[*]

**Report to the "Académie des Sciences," by M. Dumarquay, at the meetings of Sept. 6th and 21st, 1869.**

**[Translated by Robert Amory, M.D., from the Bulletin Générale de Thérapeutique, Oct. 15, 1869.]**

This substance, obtained by the reaction of chlorine upon alcohol, is liquid in the anhydrous state, though it becomes a solid when *hydrated* (*en s'hydratant*). It has an agreeable and slightly penetrating odor.

I owe to M. Follet, pharmacist, thanks for obtaining this substance in a pure state, and it is with his assistance that I have accomplished the experiments which will be here related.

We have experimented upon a large number of rabbits, and have used solutions well triturated; we have injected into the cellular tissue of our animals from twenty centigrammes of this substance up to two grammes, without causing the death of any of them. All, after fifteen to twenty minutes, have fallen into a state of complete resolution, as if profoundly asleep. This sleep lasted two or three hours, the muscular relaxation and prostration of these animals being extreme; all, however, were awaked, and after two hours showed none of these signs. The same rabbit was used in many experiments.

If the animals put to sleep by the chloral are attentively observed, it is evident that the mucous membrane of the eye and eyelids (conjunctiva) are injected; the ears become vascular to a most remarkable degree. It can readily be presumed that these animals have undergone the section of the great sympathetic, as in the beautiful experiment of M. Bernard. It is necessary to add that this great vascularity of the ears is not accompanied with an increase of temperature, but even with a decrease of one and a half degrees (C.). During the period of *chloralization* their sensibility is greatly exalted. The slightest pinch of the tail, of the ears, or of the lips, provokes in these animals disordered motions and plaintive cries sufficiently prolonged. The same pinching in the healthy animals causes nothing similar; they seem scarcely to perceive them. The cardiac pulsations become quite frequent, so as with difficulty to be counted.

During all this time respiration does not vary, and the rabbit, put to sleep by chloral, breathes as if the sleep were natural. The odor of the exhalations of the chloralized animals is easily recognized as that of chloral, from which it may be supposed that this substance is not decomposed completely (if it is ever decomposed) in the blood. If the animals experimented upon are opened alive, a congestion of the abdominal vessels is observed. The mesenteric vessels are turgid; the mucous membrane is injected, especially that of the trachea. A healthy rabbit, taken by way of comparison, also shows this extreme vascularization. The central nervous system, viz., the cerebrum, the cerebellum, and their membranes, are strongly injected; it is the same with the spinal axis. I cannot appreciate the difference in the great sympathetic on account of its small size. The microscope alone can show the modifications undergone in the nerve-cells. The muscles are very vascular—they even become of a bright red color (*rutilant*); it seems to me that the arterial blood has acquired a violet tinge.

What becomes of the chloral in the blood? For my own part, I do not think it is decomposed; and I think it is eliminated without any important modification by the respiratory passages.

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[*] Heretofore we have seen but one side of the question. If Liebreich's theory, viz., that *a* drug can be decomposed *in the blood* into its constituents, is correct, it opens a new phase of the physiological action of drugs, before this unknown and disbelieved. As these experiments exemplify another way of accounting for the action of "the new anæsthetic," it is proper that it should be made known. There may possibly be as much propriety in saying that the state of anæsthesia produced by ether, chloroform and nitrous oxide, are produced by some decomposition or alteration into one and the same primary form, as in accounting for the action of chloral by its decomposition into chloroform and formiate of soda. I have been taught that drugs do not undergo chemical transformations after their absorption from the *primæ viæ* into the blood.

As the agent we are studying has the property of being decomposed as an alkaline lye (*lessive alcaline*), the Germans have immediately admitted the fact that it is decomposed in the blood, which is slightly alkaline, and that it is to the small quantity produced by this decomposition that the anæsthetic phenomena observed by them is attributed. We cannot admit this simple method of reasoning; because far from being, like chloroform, an anæsthetic, chloral produces hyperæsthesia in a marked degree. Moreover, it is well known that the action of chloroform continues for a few minutes, whilst that of chloral persists entire hours. As may be seen, these two considerations oppose the theory of the Germans.

These physiological questions remain to be solved. The applications of this substance to therapeutics must also in the future be determined. We have thought it right to publish these researches, as they differ in their results from those of M. Liebreich. To sum up:—

1st. Chloral is the most powerful agent to produce muscular relaxation; and

2d. The most rapid of all hypnotics.

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I have the honor to communicate to the Academy of Sciences the continuation of my researches upon chloral. This time man in a state of disease has been the object of my experiment. Twenty times I have administered chloral, associated with syrup of tolu. The solution was of such a nature that a teaspoonful of this syrup contained 1 gramme (a little more than gr. xv.) of chloral. The patients easily took this preparation; the taste was not in the least disagreeable, but yet left a sensation of acridity in the pharynx. They have easily borne the administration and no accident has been determined. The dose has varied from 1 to 5 grammes. In the twenty experiments, six are negatives in their result with regard to sleep. The obstinate ones have, moreover, been men. The patient who took 5 grammes (77 grains) is a man, æt. 35, whose knee I was about to cauterize. I could only obtain a slight sleep of three quarters of an hour. On the other hand, a woman, enfeebled by an organic disease of the uterus, has slept at two different times, both in the afternoon, a peaceful sleep, with a single gramme of chloral. It may be said, *generally*, that feeble individuals, debilitated, are much more sensitive to the action of this agent, and that the duration of its action, or the length of sleep, is equally in agreement with this feebleness.

In fourteen cases where the sleep has been complete (twelve women and two men), it has happened from fifteen to thirty minutes after the ingestion of the medicament. The sleep is light, and does not at all resemble that produced by chloroform. The slightest noise awakes the patient, but in an instant they are again asleep. The very slightest prick, a simple pressure, draws from them a cry; they immediately withdraw the portion of the body pinched or pricked. I would not dare to affirm that there may be, in this case, hyperæsthesia of the skin; but I can certify that the cutaneous sensibility is preserved, whatever may be the intensity of the sleep. It is, consequently, impossible to use this sleep in surgery; nevertheless, I have used a large portion of this syrup for a lady upon whom I had performed a serious operation; immediately after the dressing of the wound, she took 4 grammes of chloral, and immediately fell into a sleep which lasted till the afternoon.

But if the sleep was calm and tranquil in several of our patients, it was otherwise with others, who were agitated, troubled with dreams and hallucinations; this was especially noticed in females who had serious organic and painful disease of the uterus, and had been accustomed to taking large doses of opium. In this case, sleep was sometimes long, but excited, mingled with cries, and, on waking, the poor patients incessantly called for their habitual injection of morphine. This circumstance proves, once more, that if the chloral is hypnotic, it is not anæsthetic. It is necessary to add that the patients do not seem to have any knowledge the next day of their agitation on waking. * * * * The pulse has not varied many pulsations. The same holds good for the respiration; as for the animal temperature, it has been depressed some tenths of a degree (C.) at the commencement of the experiment, to immediately rise to the original height. In some cases the urinary secretion has not been augmented. Some patients have involuntarily urinated in their beds. * * *

The deductions at present to be drawn are:—

1st. Chloral has a marked hypnotic action, especially on feeble and debilitated individuals.

2d. The duration is in direct agreement with this feebleness.

3d. The sleep provoked is generally calm, and is excited only in those patients who are a prey to lively pain. This leads me to counsel its use in those diseases where it is desired to bring on sleep and muscular relaxation.

4th. Finally, this agent can be given in doses of 1 to 5 grammes without determining any accident.

## FATAL CASE OF POST-PARTUM HÆMORRHAGE.

Nov. 24th, 1868, Mrs. D., æt. 34, was delivered of her sixth child. The labor was easy, and nothing that was observed at the time prognosticated hæmorrhage except its rapid conclusion, a single pain carrying the head through the lower strait and delivering the whole body of the child. The after-birth, above the average size, came away in ten minutes with slight traction of the cord, and was passed unexamined into a waiting vessel. No hæmorrhage followed, and the uterus, with a little delay, contracted firmly. A compress was laid on the womb and a roller above it, and a firm binder pinned tightly over them. I remained two hours in the house, and then left her comfortable and in high spirits. When I made my second visit, twelve hours later, I found that she had been flowing, but had then ceased. Prescribed lead and opium, and directed the nurse in regard to external applications, should hæmorrhage recur, and particularly directing that I should be called immediately should any trouble arise not readily under their control. A week passed by and I heard nothing from my patient, and my anxiety led me to visit her. Her pulse and countenance admonished me that she had lost more blood than was fit, but she directly affirmed that she had not flowed more than was proper, that she was convalescing finely, and knew of no reason why she should not be up in due time.

I left her with some misgiving, but as she was a lady of excellent sense, and had been confined five times before, I thought she ought to be a compent judge of suitable convalescence. Dec. 6th I was sent for in haste, and told that she was flowing, and been for sixty hours at intervals. I found her pulseless at the wrist, with a deathly pallor of the countenance, lying on her back with head low and feet raised, and altogether in a state of almost complete ex-sanguination. The womb was soft and reached to the umbilicus. I was immediately satisfied that the excessive hæmorrhage was due to a portion of retained placenta, but to have attempted its removal by the hand was then out of the question. My only hope was to check the hæmorrhage, and by stimulants and nutrition to rally her so she could bear the introduction of the hand. I checked the hæmorrhage, and left her with a fair pulse, after prescribing the free use of stimulants and beef-essence. The next day she was better, and each day until the 12th she was reported by the nurse as comfortable and improving. On the 12th I was summoned in haste, and found her in a state of partial syncope, nauseated and rapidly sinking. From this she rallied, and I was then convinced that her only hope was in freeing the womb of its contents by the hand. The case was plain, but the operation would be attended with the utmost peril, and I called an able physician to be present. He approved the plan, and, at the request of the family, operated, removing a small quantity of pieces of the membrane and some blood clots, made a favorable prognosis, and prescribed for the next twenty-four hours. The next day she was worse, and I removed from the vagina a gill of pieces of the placenta. I forced the womb to firm and solid contraction, so that it was scarcely perceptible in the pelvis.

Dec. 14.—She is failing rapidly. A slow hæmorrhage continues. Lead, opium and gallic acid internally, with brandy, eggs and beef essence, ice externally, ice water injections per rectum and per vagina, is now the treatment. Summoned counsel again and staid all night.

Dec. 15.—She died this afternoon, after thirty hours of constant application of the most powerful hæmostatic and restorative remedies.

Results of the *post-mortem* examination. —A portion of placenta the size of a large hen's egg was found firmly amalgamated with the womb, and its removal would have been a severe operation under the most favorable circumstances.

I subsequently learned that she had passed a large chamber-vessel full of blood clots and pieces of placenta at two sittings within three days after delivery, and yet I was told that no blood passed in that time, and I knew there was no retained blood.

*Advice.*—Examine carefully every placenta, and trust to your own convictions sooner than to the statements of others.

LONGEVITY.—Hippocrates died at the age of 109; Galen lived to be 104; Solon and Thales 100; Zeno 98; Diogenes 88; Plato 94; Lycurgus 85; Sophocles more than 100; Asclepiades also; Juvenal 100; Newton 85; Fontenelle 99; Buffon 81; and Voltaire 84.

## Selected Papers.

### ON CERTAIN INFLUENCES OF SCHOOLS INJURIOUS TO HEALTH.

By Prof. Rud. Virchow.

The injurious influences of schools upon the health of the pupils have frequently, especially since the end of the past century, attracted the attention of physicians and teachers, now on this, now on that point, yet usually without being investigated more exactly, in a truly scientific manner. * * * Only very few attempts were made by means of systematic researches to gain a basis of real facts for forming opinions, and it must be acknowledged a very great advance that a beginning has been made at present in certain directions to procure statistics of what may be called the school diseases. Only extensive, scientifically certain, *comparative* statistics will enable us to judge with full confidence what affections or diseases are produced by the schools, and what means should be adopted to prevent them. Where this basis is wanting, there are still certain general scientific rules, which are applicable to schools as well as to other institutions of society, but it cannot be denied that, in applying them, important conditions may very easily be overlooked or wrongly estimated.

The following report will endeavor to keep the two groups as distinct as possible, and carefully separate those affections well established in fact from those merely guessed at. In first line, as regards reliability of actual demonstration, we have :—

*Affections of the Eye, especially Nearsightedness.*—The first (though still inaccurate, and in no wise methodical) endeavors to establish by statistics the supposed influence of schools upon the development of nearsightedness were made in the beginning of this century by the Englishman Ware. Since then, similar researches have been made in different parts of the continent, particularly in Germany, partly official, partly by private persons, but almost never logically and systematically. Only the investigations of Dr. Hermann Cohn, of Breslau, both as regards the number of persons examined, and as regards the method and accuracy of observation, have assumed a shape corresponding to the demands of modern science, and may be considered as exceedingly valuable, nay, in a certain sense as decisive. * * *

The total result was found to be that, among the 10,060 scholars, vision was not normal in 17·1 per cent., but that the latter figure was very unequally distributed, namely :—

| | | |
|---|---|---|
| In the village schools | 5·2 | per cent. |
| " city primary schools | 14·7 | " |
| " middle schools | 19.2 | " |
| " girls' high schools | 21·9 | " |
| " "Real" schools | 24·1 | " |
| " gymnasia [high schools] | 31·7 | " |

Among the 410 students examined there were found even 68 per cent. with abnormal vision (ametropia).

Now leaving out of present consideration hyperopia, astigmatism, and the actual *diseases* of the eyes, as of secondary importance, and considering only nearsightedness proper (myopia), still we meet with the distressing result, that in all nearly 10 per cent. of the children are nearsighted, viz. :—

| | | | |
|---|---|---|---|
| In village schools | 1·4 | per cent. | |
| " city primary schools | 6·7 | " | city schools 11·4 pr. ct. |
| " girls' schools | 7·7 | " | |
| " middle schools | 10·3 | " | |
| " "Real" schools | 19·7 | " | |
| " gymnasia | 26·2 | " | |
| And among students | 60·0 | " | |

The regular increase here presented in the aggregate is repeated in a remarkable manner in taking separate account of each school according to classes :—

| | VI.[*] | V. | IV. | III. | II. | I. |
|---|---|---|---|---|---|---|
| Primary schools | — | — | 2·9 | 4·1 | 9·8 | 9.8 |
| Gymnasia | 12·5 | 18·2 | 23.7 | 31·0 | 41·3 | 55·8 |

The unfavorable opinion of Dr. Cohn is therefore, unfortunately, incontrovertible; the less so since he shows, by extensive tabular evidence, that not alone does the number of the nearsighted increase from class to class, but the degree of myopia likewise rises. * * * * * The myopia in these schools, therefore, is on the whole *progressive ;* it pursues that dangerous path which gradually leads to actual asthenopia.

Dr. Cohn justly disavows the opinion that the enormous frequency of myopia among school children should be ascribed solely and exclusively to the school. Outside of the school, even under the parental roof, many unfavorable conditions are evidently operating. * * * * * Nevertheless it may be affirmed with full assurance, that persons of the age of scholars in the first class of gymnasia do not average 55 to 56 per cent. of nearsighted, nor are there 60 per cent. among persons of the age of students. And though we may concede that insufficient illumination, fine print and fine handwriting, the habit of bending forward, &c.,

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[*] VI., or IV. respectively, being the lowest, I. the highest class.

operate injuriously in domestic occupations also, it must yet be acknowledged that some of these disadvantages at home arise from habits of the school, or at least that the school does not sufficiently oppose the acquiring of these habits, but rather directly favors some of them.

Besides the question of illumination and light of the school-room, Dr. Cohn has principally examined that of the furniture, *i. e.* desk and seat, and believes himself justified in condemning the present arrangement as positively injurious. This arrangement, he says, compels the pupils to look at print in close proximity and with their heads bent forward. This requires, on the one hand, a greater activity of the muscles of accommodation in the eye, causing in its part an increase of hydrostatic pressure in the posterior part of the eyeball and elongation of its axis; and, on the other hand, the bending forward of the head causes obstruction to the flow of blood from the eye, congestion of the eye, and hence also increased pressure in the fundus of the eye. Both circumstances together are the cause of the nearsightedness. * * *

2. *Determination of Blood to the Head.*—In the previous section the fact has already been spoken of, that the inclined position of the head causes congestions. * * * * * Other conditions operate in the same direction. In bending the head forward, the trunk naturally is also inclined forward, and the more so the lower the desk. From this results a certain compression of the abdomen, with consequent impaired activity of the diaphragm, the most powerful muscle of respiration. But incomplete inspiration opposes the return of blood from the veins of the neck into the chest.

Added to this is the circumstance that during close attention respiration is incompletely performed, the more so the less the demand for respiration is directly excited by one's own speaking. * * * *

All these circumstances favor what is called *passive* or mechanical congestion, by impeding the return of venous blood. But there is, in school, a very efficient cause also for so-called *active* congestions to the head, *i. e.* increased flow of arterial blood, and that is the active labor of the brain. * * * *

Among the various affections arising from these partly passive, partly active congestions, the following three have of late given occasion for statistical research.

*a. Headache.* Guillaume (*Hygiène scolaire.* Genève, 1864), who designates it plainly as "*céphalalgie scolaire,*" found, among 731 pupils of the Collége municipal in Neufchatel, 296 suffering frequently from headache—over 40 per cent. Girls were more often afflicted with it than boys, 51 per cent. of the former to 28 per cent. of the latter. * * * * Becker (*Luft und Bewegung zur Gesundheitspflege in den Schulen,* Frankfurt a M., 1867) examined 3564 pupils; * * * * 974 of them, or 27·3 per cent., suffered more or less from headache. * * * * In the first class of the gymnasium 80·8 per cent. complained of it. Becker concludes from his figures—what is not quite accurate—that the number is smallest in the first school years, and increases with longer attendance, greater number of hours of attendance, and the amount of mental exertion required. As an auxiliary cause he mentions too small rooms.

It is necessary to mention another circumstance for consideration. Deville and Troost found that certain gases, especially carbonic oxide, are capable of passing through red-hot iron, a circumstance not rarely confirmed in school rooms heated by iron stoves. Headache, dizziness, trembling and similar accidents are the consequences of a slight operation of this so poisonous gas. Dr. Oidtmann does not hesitate to assume chronic poisoning by carbonic oxide as comparatively frequent in his part of the country, which is rich in iron stoves.

*b. Hœmorrhage from the Nose.* Guillaume found it frequent in 21 per cent.; more frequent in boys (22 per cent.) than in girls (20 per cent.). * * * * * Becker found only 11·3 per cent. subject to epistaxis; accurate details are not given, but he states that the hæmorrhages are most frequent in the higher classes of the gymnasium, in the girls' high school and one private school—in those schools, as he says, the pupils of which sit longest in school and move about least in the open air.

*c. Goitre* [Guillaume calls it *goitre scolaire,* the scholars call it "*gros cou.*" He found it in 56 per cent.!—58 per cent. among boys, 64 per cent. in girls. It frequently disappears during vacations, and becomes permanent only at a later date, but is sometimes found in girls of 8 years after one year's attendance. Thus far the data of Guillaume stand alone, and it is doubtful if they are entitled to general acceptance, though it is true that the female sex and youth predispose to goitre, and that dilatation of the cervical vessels engenders a predisposition to this affection.]

Headache and bleeding from the nose, however, are affections sufficiently well known to physicians and many parents as not rarely accompanying attendance at school. The observations before us do not indeed suffice for drawing absolutely certain conclusions * * * nevertheless we cannot but acknowledge even now, that the school favors, and perhaps often causes, these conditions, and that their frequent occurrence should be a subject of serious consideration.

At this point the question naturally suggests itself as to the influence of congestive states, such as have been spoken of above, in relation to the mental faculties of the pupils. In fact, it cannot be doubted that such conditions are often combined with confusion, incapacity for thought and mental labor, and that, when they become habitual, they may engender dangerous predispositions of the brain. * * * *

3. *Curvatures of the Spine.* Not a few among the physicians who have paid special attention to the school question, and a great number of orthopædists, maintain the opinion that the school bears a large share of the blame in the production of deviations of the spinal column. Especially the lateral curvature, so-called scoliosis, and chiefly the form known as "habitual scoliosis," is here accused. Fahrner says: "Since almost 90 per cent. of these curvatures originate during school years, and the curvature corresponds exactly to the posture in writing, we certainly are justified in accusing the school as the main cause." Guillaume illustrates the comparison of the common form of scoliosis to the writing posture by a drawing, undoubtedly correct in itself, and adds that he found, among 731 pupils, 218 (*i. e.* almost 30 per cent.) showing a deviation of the spine.

The experiences of orthopædists unanimously agree in that the majority of scolioses originates during the period of obligatory attendance at school. * * * It can be asserted with safety, that the common scoliosis is a developmental disease of the age of obligatory attendance. It is less certain if the school as such be the chief cause of this disease. On the one hand, comparisons are wanting with such countries and ages where school attendance is not obligatory. The testimony of the Primary School Committee of New York, which Guillaume adduces, has a certain value, but it is not decisive. On the other hand, comparison of many schools would be necessary on this point. * * * * A special consideration against the implication of the school is the great preponderance of scoliosis in the female sex. [Guillaume counts 18 per cent. among boys and 41 per cent. among girls. This of course includes many slight cases. The experience of orthopædists, chiefly on severer cases, is more striking. Klopsch reckons 84–89 per cent. of all scoliotic persons to be in females, &c.] With these figures before us it cannot be doubtful that the school is not the only cause of scoliosis; nay, it must be conceded that it is not even the chief cause. * * * *

From consideration of the evils spoken of, even though they are only in part to be ascribed to the school, very definite obligations of the latter may be deduced. On the one hand, the pupils, especially the female pupils, must be appropriately seated and carefully watched in regard to posture and carriage; on the other hand, they must be offered well-timed opportunity by gymnastics to give proper exercise to their limbs.

4. *Affections of the Organs of the Chest.* * * * * Selecting [from the accurate mortuary tables of Berlin] the ages of obligatory school attendance, we meet with a rapid rise of the mortality from pulmonary and laryngeal phthisis in the ages from 10 to 15 years, which began in the preceding period of from 5 to 10 years of age, and is considerably augmented still in the later period of from 15 to 20. There occur at the age of

| | *Pulm. Phthisis.* | *Consumption.* |
|---|---|---|
| 5–10 years | 4·81 | 8·93 |
| 10–15 " | 12·96 | 7·90 |
| 15–20 " | 31·88 | 4·74 pr. ct. |

of the deaths from all causes, without considering scrofula and many other nearly related categories. This result is certainly very remarkable, especially when we consider that, in persons of these ages, only typhoid fever and cholera afford mortality figures at all approaching the above.

The mortality, it is true, cannot be ascribed to attendance at school alone; * * * nevertheless the fact must not be underrated. Circumstances of moment indicate that the school contributes much towards it. The following influences more especially may be counted as injurious:—(1) vicious air, rendered so by the presence of many children; (2) frequent "colds" caused by the change from the hot schoolroom to the free and cool air outside, by draughts from windows and doors, &c., whereby inflammations of the throat and chest are produced in great number; (3) the dust of the school-rooms; (4) the fact that the respiratory movements are impaired by the long-continued sitting.

[The author here mentions that from recent investigations we are no longer able to identify phthisis with tuberculosis, but that the former is due to a variety of processes, all of which finally produce ulcerations of the lungs.] The majority of these begin with simple catarrhal and inflammatory processes which owe their origin to external agents, especially cold and the inhalation of irritating substances (dust, carbon, &c.). Their continuation is favored by low respiratory movements, which effect accumulations and retention of excretory matters; furthermore, by the viscidity and perishable nature of these excretory substances, which are decomposed and inspissated, and on the character of which the nature of the inspired air has no less, perhaps even more, influence than the quality of the food; finally, by the continuation or repetition of the irritations.

This brief synopsis will suffice to show how dangerous may be a school with defective arrangements and inefficient superintendence, and how much reason there is to fear that a part of the fatal results of phthisis in the school ages may be attributed to the school as such, and that in part even the unfavorable termination taking place after school life may be laid to the school period.

5. *Affections of the Abdominal Viscera.*
6. *Contagious Diseases.*
7. *Injuries.*

[We pass over these sections for want of space, because they are of less importance, and no accurate statistical data are adduced. The author finally enumerates the following known injurious agencies and causes of diseases pertaining to schools, to which attention should be directed:—]

1. *The air in the school-room,* the quality of which is determined by the size of the room, the number of pupils, the mode of heating, the ventilation, moisture of the floor and walls, dust (cleanliness).
2. *The light,* as determined by the situation of the building and room, the size of the windows and their relation to the desks, the color of the walls and surroundings, artificial light (gas, oil).
3. *The sitting* in the school-room, especially the relations of desk and seat, size of the seats, their arrangement, duration of sitting.
4. *Bodily exercise,* especially playing, gymnastics, swimming, their relations to sitting and to the purely mental labor, their arrangements and superintendence.
5. *Mental exertion,* its duration and variety, the individual amount, the arrangement and duration of recesses and vacations, the extent of home and school exercises, the date of the commencement of obligatory attendance, &c.
6. The *punishments,* especially corporeal.
7. The *water for drinking.*
8. The *privies.*
9. The *means* (implements) *of instruction,* especially the choice of school books (size of type), and objects of illustration.—*St. Louis Med. and Surg. Journal,* from *Virchow's Archiv.*

## Bibliographical Notices.

*Zur Anatomie von Prurigo. On the Anatomy of Prurigo.* By Dr. RICHARD H. DERBY, of Boston. With a Plate. Read before the Imperial Academy of Sciences, Vienna, February 18, 1869.

Any contribution to our limited knowledge of an affection so harassing as Prurigo should be gratefully received. Fortunately it is with us a disease of rare occurrence; although if the loose definition so generally applied to it, and which confounds it with ordinary Pruritus of the skin, be accepted, this remark may be received by some with surprise. Prurigo and Pruritus have in reality nothing in common but their initial letters, and the itching, which in the former is only a symptom, in the latter the whole disease. In Prurigo the itching arises subsequently to and in consequence of well-marked and characteristic anatomical changes in the tissues of the skin; in Pruritus the itching precedes and gives rise to a great diversity of structural changes. Prurigo has always the same history, affects only certain regions, and is characterized by one definite and constant efflorescence. Pruritus is only another name for itching; it may affect therefore almost any region of the surface, and has no characteristic and constant form of eruption, but differs in each case according to the locality affected and its individual history. Its cutaneous phenomena are chiefly those produced by scratching, and are consequently the direct result of external, mechanical irritation. It is in fact generally no disease at all, but only a symptom of several affections of the skin. In Prurigo, on the other hand, the efflorescence, which as just stated consists of changes taking place in the deeper tissues of the skin, is only slightly modified by the subsequent irritation it produces. Moreover, Pruritus is one of the most common affections of the skin, while Prurigo is so extremely rare that it forms not one case in five hundred of cutaneous diseases treated in private practice.

This confusion in nomenclature, or rather this entire disregard for the principles of diagnosis and classification, has led some writers to place Prurigo among the so-called neuroses of the skin. This is a fashionable term of late loosely applied to all sorts of cutaneous affections. A neurosis of the skin is a lesion primarily affecting nerve-tissue and giving rise in consequence thereof to impaired or modified nerve action and subsequent structural changes in the surrounding tissues. Unless this definition be strictly adhered to almost every disorder of the skin or other organs may be called a neurosis, for diseased as much as healthy vital action is regulated by nervous influence and limited by nervous distribution. A blush is as much a neurosis as the chromidrosis to which attention was called in a recent editorial paragraph of this Journal. But to class Prurigo among the neuroses simply because itching is one of its secondary phenomena is an absurdity, unless we include in the same category, Eczema, Psoriasis, Scabies, etc., or in other words divide skin diseases into two classes, neuroses those which itch, non-neuroses those which do not itch.

Now it is upon such investigations as this of Dr. Derby that we rely to upset this and the many other one-sided theories which each new writer upon skin diseases feels bound to put forth in lack of other new material, and to demonstrate that pathological anatomy is the only true basis of classification. Our previous knowledge of the minute anatomy of Prurigo was slight and unsatisfactory. The papillæ had been found enlarged and new cells had recently been observed in profusion penetrating some of the cutaneous tissues, but nothing distinctive or peculiar to this affection had been noticed before these observations of Dr. Derby. These were undertaken under the direction of Dr. Biesiadecki, at first in Vienna and subsequently at the Krakauer Pathological Institute. Portions of skin affected were removed from seven patients, and after being hardened by chromic acid sections were made through the efflorescence, which by the microscope presented the following appearances.

1st, In pruigo there is uniformly a disease of the hair. From the outer root-sheath projects a growth, varying in length, consisting of epithelial cells, and closely united with the root-sheath. It insinuates itself between the muscular fibres of the *arrector pili*.

2d, The *arrectores pilorum* attain an unusual development. Through the increased traction these exert on the hair result, on the one hand, a more vertical position of the hair (goose-flesh); on the other a hernial protuberance of the inner wall of the hair follicle and the outer root-sheath.

3d, A serous exudation takes place in the vicinity of the diseased hair, infiltrating the tissue of the corium and the papillæ, and making its appearance as a clear or slightly bloody drop, on puncturing the papule.

This discovery, moreover, explains the absence of the papules of prurigo in places devoid of hair, such as the hollow of the hand and sole of the foot; and their infrequent occurrence in places almost destitute of hair, such as the flexure of the extremities.

The cells which form this projection from the root-sheath are continuous and identical with those of the latter. The hair bulb also shows the presence of numerous round and shining cells, and the hair itself becomes thinner and is more easily pulled out.

These observations are very interesting, giving as they do for the first time a satisfactory explanation of the anatomy of an affection which has been but little understood. The plates which accompany the text are executed with admirable clearness and effect. This little monograph, with the similar investigations of Dr. Geddings of Aiken, S. C. upon the anatomy of Lupus erythematosus, and of Dr. J. C. Warren upon that of Keloid, also published in the proceedings of the Vienna Academy during their residence in that city, are important contributions to Dermatology and honorable alike to the authors and their instructor.

J. C. White.

CRIMINAL PERFORATION OF THE UTERUS.—At a recent meeting of the New York Pathological Society, Dr. Finnell exhibited the uterus of a woman five months pregnant, on whom an abortion had been produced, with the effect of causing a large puncture of the fundus of the womb, through which a very thick catheter could be passed. The dying woman refused to divulge the name of the person who had operated upon her.—*New York Medical Gazette.*

Medical and Surgical Journal.

BOSTON: THURSDAY, NOVEMBER 11, 1869.

## LEUCOCYTHÆMIA.

(Concluded from page 248.)

To return to MM. Ollivier and Ranvier. They go on to say:—The study of the particular conditions of the capillary circulation in leucocythæmics deserves in the highest degree the attention of pathologists. It furnishes the key of certain phenomena which have been hitherto explained too easily, and without proofs, by the excessive fluidity of the blood, by the cachectic state, &c. Thanks to the well-observed fact of the distention of the capillary vessels by the white globules, with the hæmorrhage which is at times the consequence, we are able to give the physiological explanation of, and show the connective chain between many of the symptoms of leucocythæmia. [To this end the author proceeds to pass in review the principal organs of the system, as follows.]

The accumulation of white globules in the capillary vessels of the brain produces, in all probability, symptoms analogous to those of anæmia—that is to say, headache, buzzing in the ear, disorders of vision, tendency to lipothymia, &c. In a later stage these symptoms are aggravated; then somnolence sets in, and finally coma. When the tension becomes so great as to bring about rupture of the capillaries the blood is effused into the cerebral pulp, or into the arachnoid cavity; and in that case all the symptoms of cerebral or meningeal hæmorrhage are observed. Furthermore, sanguineous effusions are not confined to the brain or its membranes. There was in the case of leucocythæmia presented to the Academy of Medicine by M. Blache, in 1856, a hæmorrhage of the spinal meninges, which extended from the third dorsal vertebra to the sacrum.

At the outbreak, or during the course of a leucocythæmia, there is frequently more or less dyspnœa, amounting in some instances to orthopnœa, while yet neither the clinical or [non-microscopical] *post-mortem* examination of the lungs assigns a reason for it. All the authorities mention this dyspnœa, but without undertaking to account for it. In our opinion it recognizes a double causation: on the one hand, a diminution in the number of the red globules, which, as is well known, are veritable agents of hæmatosis; on the other hand, an accumulation of white corpuscles in the capillary system of the lungs. The proof is furnished both by the state of the blood in leucocythæmia, and by the histological examination of the pulmonary parenchyma. The capillaries of the alveoli are dilated by accumulations of white corpuscles, and consequently are found bulging. This phenomenon we were able to demonstrate very clearly in the lungs of the patient who was the subject of our first case. In other instances, the dyspnœa is connected with circumscribed lesions of the lungs, *i. e.* lymphatic products. These consist of nodules of a whitish color, of the size, on an average, of a lentil, and giving, when pressed upon, a quite decided feeling of resistance. They have no fixed seat, a point which should never be lost sight of in examining the lungs of a patient affected with leucocythæmia. And it is no less important to know that they are liable to undergo a kind of fusion, and thus lead to the formation of cavities. These characteristics, taken together, were probably what led the first observers of the disease in question to consider these bodies as masses of tubercular granulations. And that explains how it was that Ehrlich, among 98 cases of leucocythæmia collected together in his inaugural thesis, noted twelve times the existence of tubercles and pulmonary infiltrations. Böttcher was the first to throw doubt on the frequency of this complication. [But, say MM. O. and R., he failed to grasp the true interpretation of the tuberculiform nodules, in that he made them to consist of the proliferation of connective tissue. They ask if, while rejecting the idea of pulmonary tubercles, we may not feel assured that we are dealing with lymphatic products.] * * * *

One of our cases shows in the clearest manner that in the lungs of leucocythæmics there may develope lesions similar at first sight to masses of tubercular granulations. These are small tumors, which are nothing else than apoplectic accumulations. Confusion is here the more easy that these accumulations, composed mostly of white corpuscles, are devoid of the color which is usual in apoplectic effusions. Hæmorrhage takes place in miliary masses in the lungs, as well as in other organs. White corpuscles collect in the capillaries, and end by bursting them. Once outside the vessels, and effused in the alveoli, they undergo granulo-fatty degeneration, and may thus constitute caseous masses. It is presumable that if these last should be eliminated they would leave cavities behind. Thus we see that in leucocythæmics there may be pulmonary pseudo-tuberculosis. A case recited by Böttcher, together with one of ours, proves this very clearly. But, on the other hand, it cannot be denied that veritable tubercles coëxist with leucocythæmia. Our second case seems to come very properly within this category of coincidence.

In almost all cases of leucocythæmia, the pulse has been found weak and rapid. These characteristics—the frequency particularly—are not referable to the obstruction to the capillary circulation. We know, indeed, according to the investigations of Marey, that the greater the obstacle to overcome in the capillaries, the less is the number of cardiac pulsations, and the less also is the amplitude of the pulse. But, mark well! it is not only the peripheral circulation which is disturbed in leucocythæmia. The cardiac muscle is equally affected, and thence phenomena take place in this organ which must entirely alter the laws laid down by Marey. The obstruction to the circulation *in* the heart may determine an alteration in its muscular fibres. Thus in our first case, the latter had undergone fatty degeneration. Recollect, too, the diffused hæmorrhages of the pericardium, of the endo-cardium and of the heart-muscle. It is probable that these are also not without some influence upon the action of the organ.

It is not uncommon to find the gums altered in leucocythæmia. The alterations consist most often in tumefaction, softening and tendency to bleeding, to such an extent that one might suppose, at first sight, there were veritable scurvy. Mosler published, in 1868, a case of this kind entitled *leucocythæmic pharyngitis and stomatitis.* But, in this instance as in others, no microscopical examination of the parts was made. We have seen that in our first case the gums were of three times their normal thickness. They were entirely colorless, but painless under pressure, and showed no trace of ulceration or suppuration. There were wanting, then, all the phenomena necessarily characteristic of real inflammation—of leucocythæmic stomatitis. Histological examination showed, in the first place, that the swelling of the gums was due either to an accumulation of white globules in the capillaries or to interstitial hæmorrhage; in the second place, that there was at no point new formation of adenoid tissue. In a word, this swelling presented a most striking analogy to the little tumors found in different organs of the same individual. We would also call attention to the fact that in our patient, as in that of Mosler, the follicles of the base of the tongue were enlarged.

Hæmatemesis and intestinal hæmorrhage—greater or less in quantity—have also been sometimes met with. These hæmorrhagic discharges show themselves sometimes in individuals whose gastric or intestinal mucous membrane is the seat of ulcerated lymphadenomata, and then their occurrence presents nothing peculiar. Sometimes, on the contrary, they take place in the absence of any lymphatic tumor, the fact being demonstrated by autopsy. In the latter case they are susceptible of an explanation like that we have given of the hæmorrhage which occurs in other organs.

The liver seems to be almost constantly augmented in volume in leucocythæmia. Sometimes, when enlarged, it is strewn with little whitish masses, more or less voluminous, which are nothing else than lymphatic matter. At other times, on the contrary, no marked lesion can be detected, at least on superficial examination, by the naked eye. Yet such really exists, sufficiently accounting for the increase in bulk. Histological examination shows in fact that in the substance of the organ the capillary vessels, which are so numerous in a hepatic "islet," are double, triple even, in size what they are in the normal condition. The capillary dilatation is here, as in other organs, the effect of the obstruction to the capillary circulation in consequence of the accumulation of white globules. Now, we know that whenever there is such an obstruction in the liver, there is [under other circumstances] a rapid production of ascites. It is not, therefore, astonishing that the existence of this complication has been noticed in a certain number of cases. But, what is more surprising, is that it has not been met with oftener, especially that it was not present in our second case, where the accumulation of white globules in the capillaries of the liver was so considerable. It is generally too slight to necessitate paracentesis. * * * * *

It is, however, possible to explain, to a certain extent, why ascites is ordinarily inconsiderable in leucocythæmia, and perhaps why it is not of universal occurrence. In this disease the obstruction to the circulation is not confined to the hepatic terminations of the vena porta, but bears also upon the gastro-intestinal roots. * * * The hindrance, too, to the hepatic circulation may not be sufficient to cause venous stasis, and consequently peritoneal effusion.

The lesions of the kidneys, and the albuminuria which have been observed, having been looked at with the naked eye, say MM. O. and R., have been called Bright's disease. This view of those lesions they consider hastily taken. The renal lesions which we have observed in our patients, they go on to say, consist essentially in dilatations of the capillaries and in effusions of white corpuscles disseminated through the whole organ. It was easy to see the continuity of these effusions with the vessels from which they came, and which were ruptured from overdistention. At certain points the uriniferous tubes were separated by considerable spaces filled with white corpuscles. Almost everywhere the epithelium had undergone granulo-fatty transformation and a certain number of canaliculi contained colloid cylinders. Finally, in the interior of a few tubes bent upon themselves, we found central masses which seemed formed by agglomerations of white globules. * * * We also note as a third possible cause of albuminuria the passage of blood as such into the tubuli, a fact we observed in the kidneys of our first patient. * * * *

Not desiring to push this analysis further, we would merely say that the hæmorrhages which have been found in other organs, or in other tissues (lungs, uterus, nasal mucous membrane, skin, cellular tissue, muscles, &c.), as also the gangrenous lesions, the boils, &c. which have been recorded in a few rare instances, probably do not differ, as to their mechanism, from the phenomena we have been considering. Here also the point of departure, it seems to us, is a disturbance of the capillary circulation by the accumulation of white corpuscles.

[A parallel between leucocythæmia and adenia, MM. Ollivier and Ranvier think must await the development of new cases as data, before it can well be drawn. This want was partially supplied in our last issue.]

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**American Medical Education viewed by a Foreigner.**—The *Révue des Cours Scientifiques de la France et de l'Etranger* gives the substance of a report by M. Th. de Valcourt, sent to this country by the Minister of Public Instruction to study the medical institutions of the United States. M. de Valcourt shows up the easy manner in which the doctorate of medicine is obtained in our land, in a way not at all flattering to the national pride. M. de Valcourt seems not to have visited this State; since if he had, he would have made an exception to his statement that "the nominal course of study for medical students being three years is easily reduced to two."

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**Good Health, a Journal of Physical and Mental Culture.** Boston, Alex. Moore.—We have been in receipt of this Journal of popular reading for some little time, and are constrained to say that in spite of some writings and names of writers which would hardly commend the work to the Medical Profession, and which might as well give place to selected papers, we cannot help liking it. Its appearance is very attractive; there is just enough of it; its contents are varied, and much of them valuable.

With profound respect for the talented authoress of the sprightly article in the November number on "bottle-babies," we opine that it will hardly do. The fact of *that* "bottle-baby" having lived proves no more than the other fact that some people come off the battle field unscathed. Wide experience shows that cholera infantum and spoon-fed or bottle-fed babies are bosom friends; and that the best preventive of that fell disease is the breast of milk.

**Raising the Drowned.**—*Mr. Editor,*—Every now and then the quiet of the good city of Boston is disturbed by the firing of cannon over the water, where a drowned person is supposed to lie. Have you or any of your readers ever *known* of a body being raised by such means? If so, can you suggest a better theory than the old one of bursting the gall bladder?

Very Respectfully,
*Boston, October 25th,* 1869. G. W. G.

We have never known a drowned body to come to the surface at the bidding of the cannon, though it would be strange if a corpse had never appeared by coincidence during any of the many firings since the invention of gun-powder.

We have always understood that the body of a drowned person would float when enough of its solids had been converted by decomposition into gas to raise its specific gravity above that of water.

**The Medical Corps of the Navy.**—The following circular has been issued, and is being extensively circulated among the leading medical men, and the County Medical Societies of the United States.

*Sir,*—The injustice, of which the Medical Officers of the Navy have long complained, and the efforts made to secure to them the rank in the service, to which as members of the profession, they are entitled, have recently occupied a large share of public attention.

From the importance of Brooklyn as a Naval Station, and from intimate relations with Naval Officers, the members of the Kings County Medical Society have had the opportunity of thoroughly investigating and understanding the question at issue. They have therefore decided that it is their duty to take the initiative in an effort to secure the name of every Physician in the State, to a Petition to Congress in behalf of our Brethren in the Navy. Two copies of the Petition are forwarded to you, with the request that you will, with the heartiness which their cause bespeaks, endeavor to secure the name of every member of your County Society, to both copies; one of them to be used by yourself, or your friends, in bringing the matter to the attention of the members of Congress for your district, or residing in your vicinity; the duplicate to be forwarded to us, that we may have a record of the entire work accomplished, and that the voice of your County may be heard, together with that of every County of the State, at the approaching session of Congress.

Yours Respectfully,
R. C. Stiles, M.D., *President.*
H. J. Cullen, M.D.,
J. C. Hutchison, M.D.,
J. H. Hobart Burge, M.D.,
Chas. H. Giberson, M. D.,
*Committee.*

We cordially endorse the action of the Kings County Medical Society, whose able committee has so thoroughly and impartially examined into the claims of the Medical officers of the Navy. We sincerely hope that the different Societies of this State will follow its noble example, and that each member of our profession will make an individual and personal effort to secure for our Naval brethren the *positive rank and substantial advantages* to which they by long and faithful services are entitled. The honor of the profession is at stake! Its dignity and privileges are imperilled! Let every medical man remember that in bringing this subject to the attention of his Congressional Representative he is doing justice to his brethren and performing his duty to the noble guild to which he has the honor to belong.

**Auri Sacra Fames.**—Some persons who should know better are trying to deprive Boston of its right lung by filling in the Charles River basin. Would they not like to take away the heart also, by building over the Common? Why should they not abstract the whole of our *lights* at once? Auscultation of the subject reveals a *bruit de diable.*

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Obituary.—Dr. Anson Hooker, whose death on Saturday last has left a vacant space in our ranks not easily to be filled, had reached the ripe age of seventy years. Though venerable in length of days and in honors, he yet wore his age so well that we did not look upon him as an old man withdrawn from among us by seniority, but welcomed him always as the genial and instructive companion. His experience in one branch of the profession, that of Obstetrics, was probably not surpassed by that of any one now in active practice in this State. His general excellence, too, as a sound practitioner of medicine and surgery, was universally acknowledged.

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Death of Dr. Edward Gilchrist, Surgeon U. S. Navy.—Dr. Edward Gilchrist, a distinguished and well-known surgeon of the U. S. Navy, died suddenly at his residence in the U. S. Naval Hospital, Chelsea, on Saturday evening, at about 9¼ o'clock. The deceased had been suffering from neuralgia for some time past, with intense bodily pain. His sudden death is supposed to have been caused by congestion of the brain. Dr. Gilchrist entered the naval service on the 26th of January, 1832, at the age of nineteen, and served a full term of fifteen years as surgeon on board of naval vessels.

For the past nine years he was physician and surgeon of the U. S. Naval Hospital in Chelsea, and while in charge of the hospital he made many improvements about the building and grounds, and also had new buildings erected; and, in fact, the Chelsea Hospital was rated by the Naval Bureau as being the best in the Naval Department. A few weeks ago Dr. Gilchrist was relieved as surgeon of the hospital, for the purpose of acting as inspector of all the naval hospitals. Dr. Taylor, the present Surgeon at the Chelsea Hospital, took charge of the same and relieved Dr. Gilchrist Oct. 1st. The deceased was about to make a tour to the hospitals South, and at Norfolk to lay out a burial ground for United States marines and sailors. He was well known as a skilful and learned surgeon. His death will be regretted by the medical department of the U. S. Navy, and citizens generally. He was about fifty-seven years of age, and leaves a wife. He was a native of Charlestown, N. H., where his remains will be taken for interment.—*Herald.*

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On Remedies Useful in the Treatment of Phthisis.—Dr. Godwin W. Timms, one of the Physicians to the North London Consumption Hospital, in an article on this subject, published in the Dublin *Medical Press and Circular*, concludes with the following:

We may sum up shortly our treatment of consumption:—Light, simple, and nourishing diet, in quantity always in proportion to the appetite of the individual (the palate is an excellent guide, which we should be always afraid to offend), all wholesome fruits and vegetables, a moderate amount of thoroughly-cooked meat, and diluents, tea, milk, whey, &c., according to the patient's experience, avoiding all stimulants and forcing of the appetite. Regimen: excitement of the skin by constant cleanliness, friction, and woollen clothing; fresh air, sea air if possible; exercise of every kind, gymnastic exercises, singing, reading; the avoidance of every restriction by dress upon the chest-walls, and of indolence and self-indulgence of every kind; the exclusion of gas from all apartments inhabited by the invalid; early hours, and as short a sojourn as possible in the same atmosphere; hence it is better to take a short sleep in the day than to remain more than six or seven hours in the bedroom, the windows of which should never be shut except on particular occasions, or under peculiar circumstances.

Drug treatment. An obstinate cough with expectoration in the member of a consumptive family, unaccompanied by much general disturbance, is most successfully treated by twelve or fifteen drops of dilute hydrochloric acid in one ounce of water every two hours. Patients often declare that they taste the chlorine in the expectoration.

An obstinate dry cough, accompanied by emaciation, debility, and fever, is very successfully treated by half an ounce of cod-liver oil three times a day after meals, in a draught containing one-fifteenth of a grain of bichloride of mercury. Either of these remedies is good in all stages of the disease, with or without oil.

In children, cod-liver oil alone is very successful; as age advances, the remedial power of cod-liver oil is diminished.

In the middle-aged, and in consumption occurring in the survivor of a husband or wife dead of phthisis, the hydrochloric acid, in the doses mentioned above, is the most successful remedy.

Steel is only to be given for a few days at a time. All astringents, except for special objects, are injurious. The citrate or tartrate of soda or potash should be given occasionally, and these salines are quite as generally useful as steel.

Mild laxatives occasionally are very beneficial; pills of grey powder and rhubarb for the young and a mild aloetic pill for the middle-aged will tempt the practitioner who tries them to very frequent use. Trying to help towards the successful treatment of a few varieties of consumption, it would not become me to condemn any drugs recommended by other practitioners. So intractable is the disease, that every new remedy ought to have a fair trial. Familiar with the idea of patients being induced to swallow the urine of the boa constrictor and the pancreatic fluid of a pig, if a patient were to tell me that he had found benefit from imbibing the saliva of a goat, I should not hesitate to recommend him to persevere in its use.

Much more do I recommend most respectfully the practitioner who has found success from treatment by peroxide of hydrogen, the hypophosphites, chlorate of potash, &c., to persevere in their judicious use, until they can point out distinctly the cases in which they may be hopefully recommended.

All I can say is, that I have not been so fortunate as to find any decided results from their persevering exhibition.

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Copy of the letter repudiating the statements made by Surgeon N. Pinkney, before the American Medical Association at New Orleans, in May last, generally signed by the Medical Officers of the U. S. Navy, and dated July, 1869.

"Lest a false impression may be created by Surgeon Pinkney's statement, made to the American Medical Association, at its annual meeting held at New Orleans, La., in May last, that the Medical corps was never placed on a firmer basis than at the present moment, the undersigned deem it proper to say that, although Dr. Pinkney was detailed at his own request to represent the Medical Corps on the above mentioned occasion, they repudiate his whole speech in letter and spirit, because it is not an exposition, in any degree, of the views of the Corps. And they declare that the Medical Officers of the Navy are thoroughly dissatisfied with the position to which they have been recently reduced, and that they are alarmed at the still further reduction proposed in the bill of Senator Grimes, even with those modifications which Dr. Pinkney states would render it acceptable to him; and therefore they invoke Congress to secure them by law a just position or rank, with its corresponding privileges and immunities in the naval service."

It may be interesting and significant to add that the above mentioned statements of Dr. Pinkney have been published by *the Line* and are industriously and extensively circulated to give the false impression that the Medical Staff is content with its humiliated position—and also, that Dr. Pinkney, by order of the Navy Department, is engaged in inspecting the hospitals of Europe. —*New York Medical Gazette.*

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Morphine.—Upon this subject of morphine we wish to state that some parties in Boston profess to manufacture that important chemical, and actually brand it with their trade-mark; but which, after all, is nothing more nor less than Scotch morphine, manufactured by a chemist in Edinburgh, and, to some extent, smuggled *via* Canada into this country. No wonder the Boston parties are able to undersell the honest manufacturers in the West, and offer extra inducements to unprincipled dealers, whose conscience allows them to deal in such goods! Some time last year a member of that Scotch firm paid us a visit, and mentioned, in the run of conversation, his intentions of introducing his morphine; he also, afterwards, visited Canada, and wrote us that he had succeeded in making the desired arrangements, which, at that time, we did not comprehend fully. On his return, he tried several parties to espouse his cause, and stand godfather to his morphine in this country; after some delay he found his men in the moral city of Boston, and to-day he, no doubt, has the extreme pleasure of seeing his morphine labelled in true Boston-like style, adopted, carefully nursed, and sent into the drug market under the fostering care and with the names of his Boston friends.

To be candid in this matter, we regarded the representative of the Scotch firm somewhat too sanguine in his expectations, and, trusting to the honesty of our business men, we did not give this matter the deserving attention we ought to have done had we fully understood his intentions. We think, nevertheless, it is time to notify the

Department in Washington, and hope the honest men in the drug trade will turn a cold shoulder on Scotch-smuggled morphine, even if it is sugar-coated with Boston labels, &c.—*N. Y. Druggists' Price Current.*

DISLOCATION OF BOTH BONES OF THE FOREARM FORWARDS.—Dr. Forbes reported the following case of this rare accident to the College of Physicians of Philadelphia:—

On the 10th of December I was called to see M. M., a boy about 12 years old. His accident had occurred but a short time previous to my arrival. He had been exercising himself in a gymnasium, and the proprietor, who saw him at the time, stated that while going up a ladder hand over hand he fell, striking, while falling, the back of his elbow, "at the tip" against the margin of a table, the fall (which was only of about two feet) having taken place just as he had drawn his head near one round of the ladder, which he held in the grasp of his right hand, and while in the act of extending the left hand to seize the round above.

On examination, the right forearm was found rigidly fixed at not quite a right angle with the arm. The arm was shortened and the forearm lengthened. The hand was supinated and the tendon of the biceps somewhat tense. The olecranon was discovered lodged distinctly in front of the humerus and above the lower margin of the trochlea, and the head of the radius separated from the capitellum by a depression in which the finger could be placed. The dislocation was complete.

While he was under the influence of ether, I flexed the forearm on the arm, so as to disengage the posterior and upper margin of the olecranon from its position in front of the humerus, and while holding the arm firmly, both radius and ulna, being still strongly flexed, were brought downwards and backwards, and the reduction was readily effected.

The general gonflement, tenderness and discoloration of the entire extremity were excessive for some three weeks after the accident, and it was not until six weeks had elapsed that complete restoration of all the movements of the joint was accomplished, thus indicating how extensive must have been the laceration of the neighboring parts.—*Am. Jour. of Med. Sciences.*

HAHNEMANN OUTDONE.—A few weeks ago a friend of ours was seized with a sudden attack of dysentery, attended with considerable fever. A homœopathic practitioner was called in, who after mixing up a couple of tumblers-full of "mercurius," and "belladonna," of surprising attenuation, took his departure. Feeling somewhat anxious, we called at a late hour in the evening, and found the patient in a state of stupor, which there was no mistaking. An examination of the pupil revealed dilatation to an alarming extent. We advised a discontinuance of the medicine, and went home in deep meditation on the marvels of homœopathy. Next morning evident signs of salivation were experienced by the patient, and the evening found it thoroughly established. During our visit, next evening, we met the doctor, and on inquiry found that the mercurius had been administered in the form of "our corrosivum," and in the dose of the 1,000,000,000th part of a *grain;* and the belladonna, which was described as a "pharmaceutic tincture," in the same considerable amount. Being a man of peace, and not wishing to reveal our ignorance of the action of these remedies, we avoided discussion by expressing our astonishment; but, although knowing there are heights and depths of therapeutical knowledge to which we have not yet attained, we must confess to having misgivings as to the degree of attenuatum in which the medicines were exhibited. It may be that potency of the "pharmaceutic tincture" affected the vision of the worthy doctor, preventing a proper appreciation of quantity; or a slight mercurial tremor may have caused his hand to shake while apportioning the dose of "our corrosivum;" of this we know not, but at all events the effects were realized, and it will be well for writers on the action of these remedies to make a note of it.—*Canadian Pharmaceutical Journal.*

THE CONTAGION OF DOG MANGE.—The etiology of *tœnia favosa* in man may be regarded as decided by M. St. Cyr, of Lyons, who put beyond doubt its transmissibility from animals to man.

The presence of mangy dogs in the Veterinary School at Lyons has produced a true epidemic amongst the mice. Three pupils of the school have submitted themselves to the contagion, and solution of corrosive sublimate in glycerine has been found to be almost a specific.—*Med. Press & Circular.*

The College of Physicians and Surgeons, New York, began its sixty-third session on the 4th inst. Prof. J. W. McLane made the opening address.

always retained remarkably well. In from four to six hours after the injections were begun, the discharges from the groin consisted principally of the injected matter, semi-digested. Partially digested food never came from the wound unless she had been taking injections for some hours; these usually consisted of milk or beef-tea, with a little brandy, and sometimes laudanum. She had a natural stool nearly every day after the third day following the operation, besides the discharge from the groin.

She never gained sufficient strength to justify any attempts to close the opening in the intestine and groin.

## Selected Papers.

### STRANGULATED HERNIA.

The *Medical Record* of Oct. 15th has the following interesting cases of strangulated hernia. Cases I. and II. are reported by Dr. James L. Little, and Case III. by Dr. F. D. Lente.

Case I.—*Strangulated Inguinal Hernia on left side, in which the protrusion consisted of the Appendix Vermiformis, a portion of the Cæcum, and several inches of the Ileum.*

On January 13th, 1869, I was called to see a child, aged *four months*, which was under treatment, by Dr. E. B. Belden, for gastric disturbance. The doctor had not seen the child for about twenty-four hours previous to my being called in, having been detained by some urgent case. On arrival I found the patient suffering from strangulated inguinal hernia of the *left side*.

The hernia first made its appearance about twelve hours previous to my visit, and had gradually increased in size, owing to the straining caused by the child's crying. The patient had been constantly vomiting for the last three or four hours. On examination the hernial tumor was found to be tense and resonant on percussion.

Taxis was tried and failed. The little patient was thereupon etherized by Dr. Samuel B. Ward, and another attempt at taxis was made, upon the failure of which I proceeded to operate, assisted by Drs. J. L. Campbell and P. C. Cole.

The operation was performed in the usual manner.

On opening the sac the hernia was found to consist of the appendix vermiformis, with a knuckle of the cæcum and about four inches of the ileum. The internal ring being the seat of the stricture, it was enlarged with the hernia knife, and an attempt was made to reduce the protrusion. Here considerable difficulty was met with, owing to the cavity of the pelvis being so very small.

On attempting to push back the intestines, more and more of them were forced out, until about eighteen inches of the ileum protruded from the abdominal cavity.

The child was then raised from the table by his feet, with the head hanging down, and after some trouble the intestines were replaced. Dr. Cole then, with his finger, made pressure over the internal ring, while the wound was closed by means of sutures, and a compress of adhesive plaster, folded with the adhesive side out to prevent it from slipping, was then placed over the external ring and over the inguinal canal, and secured by a spica bandage.

Four hours after the operation a spontaneous discharge from the bowels took place; this was followed by an obstinate diarrhœa, in consequence of which the patient died on the third day after the operation.

*Remarks.*—This case is one of extreme rarity. Teale, in his admirable work on Hernia, refers to a case mentioned by Sandiford, in which a hernia of the left side was formed by the cæcum, but does not state the age of the patient. With this exception, I have not been able to find a reported case in which this condition existed. In the infant the cavity of the pelvis is small, and the meso-cæcum is proportionately larger than in the adult, and allowing a greater freedom of movement in the cavity of the pelvis, may thus be enabled to descend into a hernial sac on the left side.

Transposition of the viscera, which sometimes occurs, has been suggested to explain this case; but the examination of the intestines at the time of the operation showed that the relation of the appendix vermiformis and the cæcum with the ileum was normal.

Case II.—*Strangulated Hernia of the Tunica Vaginalis, the Testicle being in the Inguinal Canal.*

August 16th, 1868, at 12 M., I was called to see J. P., aged 40, who was suffering from a strangulated hernia.

The man gave the following history:—Has been suffering from rupture for many years; was accustomed to wear a truss during the day, removing it on retiring to bed.

For some time past he had been drinking rather freely, and after rising this morning he went out to get his usual glass of liquor, neglecting to apply his truss. While out he began to suffer from symptoms of strangulation. After making several unsuccessful attempts to reduce the rupture, Dr. Dumond, the family physician, was called in, and he not being able to relieve the patient by taxis, sent for me. On arrival I found the sufferer with all the symptoms of strangulated hernia—vomiting and severe pain in the vicinity of the umbilicus. On examination I found a large tumor, about the size of an orange, in the right iliac region, just above Poupart's ligament, resembling very much a large femoral hernia, which had turned up over Poupart's ligament. Patient stated that it had always been considered a femoral hernia. On further examination I found that the right testicle was missing; patient remarked that he had never had more than one.

The tumor had an elastic feeling, and was resonant on percussion; the situation of the testicle could not be ascertained.

Was told by the patient that the hernia had never descended into the scrotum. The case was then diagnosticated as an oblique inguinal hernia, confined in the inguinal canal by an undescended testicle. After making an ineffectual attempt to reduce by taxis, and finding that the symptoms were urgent, I deemed it advisable to operate immediately. The patient was etherized by Mr. Hurdsfield, a medical student, taxis was again tried, and failing, the following operation was performed, Dr. Dumond, attending physician, and Drs. White and P. C. Cole assisting.

*Operation.*—The incision, about four inches in length, was made in the most prominent part of the tumor, parallel with the median line of the body. Cutting the skin and superficial fascia the aponeurosis of the external oblique muscle was then divided upon a director and the hernia immediately brought into view. It consisted of about twelve inches of the small intestine, and was of a dark red color. The testicle, of natural size, was now seen in the wound, in the neighborhood of the external ring. The finger was then passed up into the internal ring, which seemed to be the seat of stricture; this was enlarged by the hernia knife and the intestine returned. The wound was then closed by silver wire sutures, allowing the testicle to remain in its original position, and a compress and spica bandage applied. Ordered one grain of opium, to be taken every three hours.

Five hours after operation:—Patient in good condition; pulse 92; slight tenderness over the abdomen; ordered opium, grain j., every two hours; poultices of linseed meal applied to abdomen.

Twenty hours after:—Pulse 72; patient vomiting occasionally, and appears to have some symptoms of delirium tremens; opium continued, and carbonic acid water given to allay vomiting.

Forty-four hours after operating:—Vomiting has ceased, and general condition somewhat improved; slight erysipelatous inflammation; ordered lead and opium wash.

Seventy-two hours after:—Patient's bowels moved spontaneously, and from this time forth his condition progressed very favorably; the wound suppurated moderately, and in about two weeks after operating he was able to pursue his usual vocation.

*Remarks.*—This case is similar to the one reported by Dr. Gurdon Buck in the *Record* of the date of July 15, 1869. No distinct peritoneal sac could be found; the peritoneum lining the inguinal canal was adherent to the walls of the canal, so that when the skin and superficial fascia were divided the tendon of the external oblique muscle was exposed, and lifting a small part with the forceps and making it so as to introduce a director, on cutting it the intestine was immediately exposed to view. The testicle, with spermatic cord and intestine, was in the same peritoneal cavity as in congenital hernia.

Case III.—*Strangulated Encysted Hernia of Tunica Vaginalis, complicated with a partially descended Testis, and also with Hydrocele.*

A. H., aged 20 years, a very stout, athletic youth, while making a violent effort at his work, on January 15th, 1869, felt something give way in his left groin, attended by the most intense pain, and almost causing him to faint; he, however, was able to lie on his stone-boat to be drawn home. Upon visiting the patient an hour or so after the accident, I found that he was considerably prostrated, that he had vomited twice, and was in great distress, complaining of severe pain in the right groin; where I found a swelling over the external ring, extending into scrotum, which was the seat of great tumefaction, very tense, but distinctly fluctuating; no gurgling, no impulse on coughing; there was a decided constriction just above the centre of the tumor; no translucency by dioptric test; the exact location of testicle could not be made out. Learned from patient that the testicle had not descended at all into the scrotum until he was 12 years old; could be felt at the external ring some time before. Since then he had been able to move it up and down the scro-

# Medical Miscellany.

**Deaths in the City of Providence, R. I.**—In the month of October the number of deaths was 100; males, 56—females, 44. Number under 5 years of age, 41; over 60 years of age, 18. From consumption, 18; typhoid fever, 6; scarlatina, 7. On the subject of the comparative high percentage of infantile mortality during the month, Dr. Snow, the City Registrar, remarks:

"Children are killed by the manner in which they are dressed and by the food that is given them, as much as by any other causes. Infants of the most tender age, in our changeable and rough climate, are left with bare arms and legs and with low-neck dresses. The mothers, in the same dress, would shiver and suffer with the cold, and would expect a fit of sickness as the result of their culpable carelessness. And yet the mothers could endure such treatment with far less danger to health and life than their tender infants.

"A moment's reflection will indicate the effects of this mode of dressing, or want of dressing, on the child. The moment the cold air strikes the bare arms and legs of the child, the blood is driven from these extremities to the internal and more vital organs of the body. The result is congestion, to a greater or less extent, of these organs. In warm weather, the effect will be congestion of the bowels, causing diarrhœa, dysentery, or cholera infantum. We think this mode of dressing must be reckoned as one of the most prominent causes of summer complaints, so called. In colder weather, congestion and inflammation of the lungs, congestion and inflammation of the brain, convulsions, &c., will result. At all seasons, congestion, more or less, is caused, the definite effects depending upon the constitution of the child, the weather, and various other circumstances.

"It is painful, extremely so, to one who reflects upon the subject, to see children thus decked like victims for sacrifice, to gratify the insane pride of foolish mothers. Our most earnest advice to all mothers is to dress the legs and arms of their children warmly, at all events. It would be infinitely less dangerous to life and health to leave their bodies uncovered than to leave their arms and legs bare, as is the common custom."

**Prompt Action.**—At the hôpital Cochin laryngotomy was recently performed on a workman. The membranes obstructed the tube, and the patient was on the point of expiring. The *interne*, M. Bailly, snatched away the instrument, and applying his lips to the wound forcibly drew into his mouth the sanguinolent matter which obstructed respiration. The patient was saved.

**Muriate of Ammonia.**—Dr. W. L. Atlee repeats that he has settled down upon the muriate of ammonia as the only agent deserving of any confidence for the dispersion of uterine fibroids.

**Ergotine in Galactorrhœa.**—M. Le Gendu, in the *Gazette des Hôpitaux*, gives three cases in which galactorrhœa ceased promptly under the use of ergotine.

**Chloral.**—Mr. Markoe, the well-known pharmaceutical chemist of this city, has manufactured a specimen of chloral.

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**To Correspondents.**—Communications accepted:—Two Cases of Dislocation of the Clavicle—Peritonitis and Ulceration of the Gall-bladder following a Kick—Horny Tumor of Ear—Tuberculosis of the Iris—Ganglion.

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**Books and Pamphlets Received.**—Cataract and its Treatment, Medical and Surgical. By Jabez Hogg, F.L.S., Senior Assistant Surgeon to the Royal Westminster Ophthalmic Hospital, London. Pp. 36.—Our Home Physician; A new and popular Guide to the Art of preserving Health and treating Disease; with plain Advice for all the Medical and Surgical Emergencies of the Family, &c. &c. By George M. Beard, A.M., M.D., Member of the New York County Medical Society, &c. With numerous Illustrations. E. B. Treat & Co., Publishers, New York. Pp. 1006.—Percussion and Auscultation as Diagnostic Aids. A Manual for Students and Practitioners of Medicine. By Dr. Carl Hoppe, Assist. Physician to the 6th Westphalia Regiment of Infantry. Translated by L. C. Lane, M.D. J. B. Lippincott & Co., Publishers, Philadelphia. For sale by James Campbell, Boston. Pp. 152.—A Compend of Materia Medica and Therapeutics, for the use of Students. By John C. Riley, A.M., M.D., Washington, D. C. Published by Lippincott & Co., Philadelphia. For sale in Boston by Jas. Campbell. Pp. 570.

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**Married,**—In this city, 2d inst., Horace Kimball, M.D., of New York city, to Marianna H. Everett, of West Newbury, Mass.

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**Died,**—At the U. S. Naval Hospital, Chelsea, Dr. Edward Gilchrist, a well-known and distinguished Surgeon in the U. S. Navy, aged 58.—In East Cambridge, Dr. Anson Hooker, one of the oldest and ablest physicians in Massachusetts, aged 70.—In Xenia, Ohio, Oct. 11th, Dr. William Bell, aged 70.

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***Deaths in seventeen Cities and Towns of Massachusetts for the week ending Nov. 6, 1869.***

| Cities and towns. | Number of deaths in each place. | Prevalent Diseases | | | |
|---|---|---|---|---|---|
| | | Consumption. | Pneumonia. | Typhoid Fever. | Croup. |
| Boston . . . . | 85 | 17 | 6 | 2 | 4 |
| Charlestown | 16 | 4 | 1 | 1 | 0 |
| Worcester . . | 14 | 1 | 1 | 1 | 0 |
| Lowell . . . . | 16 | 2 | 0 | 1 | 0 |
| Milford . . . | 4 | 1 | 0 | 0 | 0 |
| Chelsea . . . | 6 | 0 | 3 | 0 | 2 |
| Salem . . . . | 7 | 1 | 2 | 0 | 0 |
| Cambridge . | 9 | 2 | 2 | 3 | 0 |
| Lawrence . . | 3 | 1 | 0 | 1 | 0 |
| New Bedford | 6 | 0 | 2 | 0 | 0 |
| Springfield . | 7 | 3 | 0 | 1 | 0 |
| Lynn . . . . | 8 | 0 | 2 | 1 | 0 |
| Gloucester . | 12 | 3 | 1 | 1 | 3 |
| Taunton . . | 6 | 1 | 1 | 0 | 0 |
| Newburyport | 4 | 0 | 0 | 0 | 1 |
| Somerville . | 3 | 1 | 0 | 1 | 0 |
| Fall River . | 9 | 1 | 0 | 0 | 1 |
| | 215 | 38 | 21 | 13 | 11 |

George Derby, M.D.,
*Secretary of State Board of Health.*

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**Deaths in Boston** for the week ending November 6, 85. Males, 40—Females, 45.—Accident, 2—apoplexy, 5—asthma, 2—congestion of the brain, 1—disease of the brain, 6—bronchitis, 1—burns, 1—cancer, 2—cholera infantum, 2—consumption, 17—convulsions, 3—croup, 4—cyanosis, 1—debility, 6—diarrhœa, 1—dysentery, 2—scarlet fever, 3—typhoid fever, 2—disease of the heart, 2—hip disease, 1—intemperance, 2—disease of the liver, 2—inflammation of the lungs, 6—old age, 2—paralysis, 2—pleurisy, 2—premature birth, 2—smallpox, 1—unknown, 2—whooping cough, 1.

Under 5 years of age, 32—between 5 and 20 years, 2—between 20 and 40 years, 12—between 40 and 60 years, 15—above 60 years, 14. Born in the United States, 58—Ireland, 21—other places, 6.